## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

Claims 1 - 8 (canceled)

Claim 9 (currently amended): A solder configuration, comprising a pad having a lower, substantially planar surface and an upper surface characterized as substantially completely non-planar and circuitous and adapted to receive solder, thereby forming a solder boundary portion of a solder joint, said non-planar and circuitous surface being disposed within an intermetallic region encompassing said surface of said pad and said solder whereby a crack forming in said solder proximate a said solder boundary with said intermetallic region is influenced to proceed in a direction substantially parallel to said non-planar and circuitous upper surface, thereby lengthening its travel, and preventing failure increasing fatigue life of said solder joint.

Claim 10 (currently amended): A solder configuration, comprising a pad having a lower, substantially planar and an upper surface characterized as a substantially completely nonplanar, serpentine surface adapted to receive solder, thereby forming a solder boundary portion of a solder joint, said solder boundary defining non planar and serpentine surface being disposed within an intermetallic region encompassing said surface of said pad and said solder extending therefrom and penetrating both said solder and said upper surface of said pad, whereby a crack forming in said solder proximate a said solder boundary with and within said intermetallic region in said solder is influenced to proceed in a direction substantially parallel to said non-planar and serpentine upper surface along a non-planar, serpentine path, thereby lengthening its travel, and preventing failure increasing fatigue life of said solder joint.

Claim 11 (withdrawn): A solder configuration, comprising a pad having a surface upon which an intermetallic boundary interface is disposed, said intermetallic boundary interface defining a separation between said pad and solder that forms part of a solder joint, said intermetallic boundary interface being characterized as non-planar and having a plurality of steps, whereby a crack forming in said solder is influenced to proceed along said interface with a non-planar, stepped path, thereby lengthening its travel, and preventing failure of said solder joint.

Claim 12 (withdrawn): A solder configuration, comprising a pad having a surface upon which an intermetallic boundary interface is disposed, said intermetallic boundary interface defining a separation between said pad and solder that forms part of a solder joint, said intermetallic boundary interface being characterized as non-planar and having a plurality of concentric interruptions, whereby a crack forming in said solder is influenced to proceed along said interface with a non-planar, interrupted path, thereby lengthening its travel, and preventing failure of said solder joint.

Claim 13 (withdrawn): A solder configuration, comprising a pad having a surface upon which an intermetallic boundary interface is disposed, said intermetallic boundary interface defining a separation between said pad and solder that forms part of a solder joint, said intermetallic boundary interface being characterized as non-planar and having a plurality of interdigitated interruptions, whereby a crack forming in said solder is influenced to proceed along said interface with a non-planar, interrupted path, thereby lengthening its travel, and preventing failure of said solder joint.

Claim 14 (withdrawn): A solder configuration, comprising a pad having a surface upon which an intermetallic boundary interface is disposed, said intermetallic boundary interface defining a separation between said pad and solder that forms part of a solder joint, said intermetallic boundary interface being characterized as non-planar and having a cross-shaped interruption, whereby a crack forming in said solder is influenced to proceed along said interface with a non-planar, interrupted path, thereby lengthening its travel, and preventing failure of said solder joint.

Claim 15 (new): A solder configuration comprising:

- a) a pad having a lower, substantially planar lower and an upper surface characterized as substantially completely non-planar and circuitous and adapted to receive solder;
- b) solder applied to said upper surface thereby forming a solder joint therewith; and
- c) an intermetallic region formed adjacent said upper surface and penetrating into both said pad and said solder adjacent said upper surface of said pad, said intermetallic region following a path having a shape substantially identical to said non-planar and circuitous upper surface such that a crack forming proximate said upper surface of said pad and within said intermetallic region is influenced to proceed in a direction substantially parallel to said non-planar and circuitous upper surface, thereby lengthening its travel, and increasing fatigue life of said solder joint.

Claim 16 (new): A surface mounting attachment system utilizing a solder bead for attaching an electrical component to a solder pad on a substrate, the improvement comprising: a solder pad on said substrate having a substantially planar lower surface disposed on said substrate and an upper surface characterized as substantially completely non-planar and circuitous and adapted to receive solder, such that when solder is applied thereto so as to form a solder joint, any crack in said solder proximate said upper surface of said solder pad is influenced to proceed along a path substantially conforming to said non-planar and circuitous upper surface, thereby lengthening its travel, and preventing failure of said solder joint.